

### **Remarks**

Claims 1-12 are pending in this application. Claims 1-12 are rejected.

Claim 11 is cancelled.

### **Claim Rejections - 35 U.S.C. § 103**

Claims 1-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Roser (US Patent 6,190,701) in view of Johnson (US Patent 5,376,359) and Owens, "Low GWP Alternatives to HFCs and PFCs, Report of 3M Company Speciality Materials, St. Paul, MN, USA (2000).

Applicant respectfully traverses the present rejections for the following reasons. The Examiner's conclusion that it would have been obvious for the person skilled in the art to replace the perfluorinated alkanes (PFCs) of Roser with a hydrofluoroether disclosed in Johnson to arrive at the invention according to independent claims 1 and 12 is not correct. Applicant maintains that the hydrofluoroethers disclosed at column 2, lines 41-46 of Johnson are merely non-exemplified and speculative examples of aerosol propellants which may be used in the invention of Johnson.

The specific examples of Johnson use hydrofluoroalkanes (HGAs) and not hydrofluoroethers. Therefore, there is no definite and therefore obvious teaching or suggestion in Johnson that the skilled person could or would alternatively employ a hydrofluoroether in the formulations of Roser with the expectation of arriving at the present invention with its beneficial dispersion properties. The physical and chemical properties of these two classes of compounds (i.e., PFCs and hydrofluoroethers) differ. As an example of a simplistic comparison (non-fluorinated) which helps to demonstrate a distinction between a hydrofluoroether and a HFA, the common laboratory solvent diethyl ether ( $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ ) and the identical chain-length alkane *n*-pentane ( $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ ) have vastly different chemical and physical properties.

Therefore, one skilled in the art of chemistry would not interpret prior art disclosures as indicating that *n*-pentane and diethyl ether confer the same or similar properties in a complex chemical system. This is because of their differing functionality, i.e., -O- against -CH<sub>2</sub>-, which by analogy would apply also to the fluorinated variations of these compounds.

The combination of one of the hydrofluoroethers disclosed in Johnson with the formulations disclosed in Roser does not provide any certainty with respect to the properties of such a combination nor an expectation of success. Moreover, the combination of Johnson and Roser does not provide a clear, direct and unambiguous teaching to use the hydrofluoroethers to attain beneficial dispersion properties. Accordingly, it is submitted that independent claims 1 and 12 are non-obvious over a combination of Roser and Johnson.

Moreover, Applicant also points out that Owens does not render the present invention obvious when further combined with Roser and Johnson. This is because Owens merely addresses issues relating to the environmental impact of PFCs. As the present invention avoids the use of PFCs, it provides a more environmentally friendly option. However, Owens does not discuss the dispersion properties of using hydrofluoroethers for facilitating the dispersion of glassy or amorphous particles in a liquid. Therefore, it provides no teaching to the skilled person on how to devise ways to obtain good dispersion properties.

Accordingly, for at least these reasons, claims 1-12 are allowable under 35 U.S.C. § 103(a) over Roser in view of Johnson and Owens.

### **Double Patenting**

Claims 1-6, 10 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 13, and 16-18 of Roser (US Patent 6,190,701), in view of Johnson (US Patent 5,376,359).

As set forth above, Applicant has demonstrated the non-obviousness of the present invention over the combination of Roser and Johnson. Accordingly, claims 1-6 and 10-12 are

allowable under the judicially created doctrine of obviousness-type double patenting over claims 1-4, 13, and 16-18 of Roser, in view of Johnson

### **Conclusion**

Applicant has made a genuine effort to respond to each of the Examiner's objections and rejections in advancing the prosecution of this case. Applicant believes that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If any additional issues need to be resolved, the Examiner is invited to contact the undersigned at his earliest convenience.

Applicant has previously submitted and paid for a one month extension of time in response to the final Office Action of December 3, 2009. The Petition fee of \$245.00 for a two month extension of time is being charged to Deposit Account No. 02-3978 via electronic authorization submitted concurrently herewith. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to Deposit Account No. 02-3978.

Respectfully submitted,

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